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# FORTUNE

# FIXING AMERICA'S ECONOMY

## WHAT TO DO ABOUT

- Productivity
- Jobs
- Trade
- R&D
- Taxes
- Budget
- Health Care
- Infrastructure
- Regulation
- Environment

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OCTOBER 19, 1992

VOL. 126, NO. 8

# FORTUNE

SPECIAL REPORT

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# EDITOR'S DESK

## A MODEST UNDERTAKING

LAST SPRING when Marshall Loeb, our managing editor, conceived the special report beginning on page 48, he gave it the working title "An Agenda for America." He explained the timing of the project, the reason for it, and what he wanted: By October, as the election approached, the candidates would be kicking up a rhetorical dust storm, he calculated, obscuring one issue after another. Our readers might be left wondering about the true state of U.S. industry, say, or the actual import of the federal budget deficit. Get the facts, he told us, and use them to cut through the controversy. Then identify the biggest challenges that face the U.S. and tell our audience how best to address them.

About half the fix-it team—the rest were still out scouring.

As writers and reporters proceeded with this modest undertaking through the course of the summer, we found our focus sharpening. On an office wall at Clinton headquarters hangs an increasingly famous sign reminding them of their central issue: THE ECONOMY, STUPID. That's also what we found the people we talked to—in business, government, academia, and on the street—most worried about. Hence our new thrust and title: "Fixing America's Economy."

Upward of a dozen of our staff scoured the country for incontrovertible figures, the freshest thinking, and the latest cuts at the data. We were rewarded with some surprises: U.S. productivity remains strong, but recent improvements have a scary underside. Some of the candidates' most ballyhooed proposals for the economy stand little chance of working. Filling in potholes beats mega-investment in infrastructure. In all this, we attempted to do what Marshall constantly urges on us: Pursue the journalism of ideas. Somebody defined intelligence as the capacity to surprise. We hope you'll find plenty to think about, and quite a few surprises, in our special report.

It's always surprising to see so-called everyday reality through the eyes, or camera lens, of someone with a unique take on the world. To illustrate our report, picture researcher William Nabers commissioned New York photographer Jeff Mermelstein. To quote Nabers on Mermelstein: "His pictures show a real affection for the strengths and foibles of the American character." We think that shows on the pages that follow.

**Jeff Mermelstein**

ASSISTANT MANAGING EDITOR

FORTUNE (ISSN 0015-8259) Published biweekly, with three issues in October, by Time Inc. Principal office: Time & Life Building, Rockefeller Center, New York, NY 10020-1393. Reginald K. Brack Jr., Chairman; Don Logan, President; Joseph A. Ripp, Treasurer; Perry M. Johnston, Secretary. Subscriptions: U.S. (announcement issue plus 27 issues) $52.95; Canada (one year [27 issues] $53.73). Second class postage paid at New York, NY, and at additional mailing offices. Authorized as second class mail by the Post Office Dept., Ottawa, Canada, and for payment of postage in cash. Member, Audit Bureau of Circulations. POSTMASTER: Send address changes to FORTUNE, P.O. Box 30604, Tampa, Fla. 33630-0604. Customer inquiries: FORTUNE, P.O. Box 60001, Tampa, Fla. 33660-0001. Phone: 1-800-621-8000. © 1992 Time Inc. All rights reserved. FORTUNE is a registered mark of Time Inc.

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# U.S. PRODUCTIVITY: FIRST BUT FADING

America's workers are the world's most productive—but the nation's lead is eroding. Unless the U.S. fixes some serious weaknesses, its standard of living is at risk. ■ *by Thomas A. Stewart*

WHEN YOU come down to it, the purpose of work and investment is to live well today and better tomorrow. That depends on each worker and machine yielding a growing output of ever more valuable goods and services—in other words, rising productivity. For America to retain the world's highest standard of living, its factories, stores, and offices must be the most productive in the world. Says General Electric CEO Jack Welch: "For a company and for a nation, productivity is a matter of survival."

The U.S. is surviving pretty well, thank you. According to Organization for Economic Cooperation and Development data, the average American worker produced $45,100 of goods and services in 1990, vs. $37,850 for the average German worker and $34,500 in Japan, where workers toil more hours per year. The figures are particularly useful because they're adjusted for purchasing-power parity, eliminating distortions caused by exchange-rate fluctuations.

Labor flexibility is the biggest reason for the U.S. advantage, says Bill Lewis, a partner at McKinsey & Co. who has been studying international productivity. American business is much freer than most competitors—which are often restrained by unions, social policies, and regulation—to hire and fire, reorganize, and deploy resources where they will be most productive.

Being king of the hill is great, but the good news disguises three disquieting

■ RUBBERMAID

facts. First, U.S. productivity is improving more slowly than before and slower than its rivals'. Second, American business does a terrific job of increasing productivity by cutting inputs like labor but needs to work on the output side by investing in people and innovation. Third, productivity growth has been a sluggard in the service sector—the economy's largest. Unless these trends change, Americans' standard of living is at risk.

Productivity is output divided by input. That's simple; getting accurate numbers is not. Outputs of goods and services that can't be quantified in market-determined dollars—as they often can't be within companies—have to be adjusted for quality and other indices of the value added; inputs can be measured as labor, or labor plus capital. After you measure them, do the arithmetic. If your company increases output while holding input steady, productivity goes up; if it cuts input without losing output, productivity goes up. If it does both—raises output while cutting input—buy the stock.

Take the math a step further to find the standard of living. When a company lays off an employee who labored mostly as a greeter at the water cooler, national productivity rises: same output, less input. But until he finds new, useful work, the standard of living—GDP per capita—hasn't changed: same output, same population. Living standards won't improve until investment, innovation, entrepreneurship, and other engines of growth put people to work creating outputs that weren't put out before.

America's lead is good news, both for its competitiveness and its standard of living, only if productivity is rising. Rising it is, but slowly. As measured by the U.S. government, output per hour, which grew 3% a year from 1937 through 1973, has risen sluggishly since, just 0.9% a year. Improvement slowed in other big economies too, but not as much. The OECD (which measures output per employee) says U.S. business sector productivity rose 0.5% a year from 1979 through 1990, while West Germany's increased 1.6% and Japan's 3%. In the long run, that's trouble.

No one knows why America's productivity growth stagnated. Economists used to blame the oil shocks of the Seventies, but productivity growth didn't perk up when petroleum prices fell. Better candidates are insufficient private and public investment combined with tens of millions of new workers—women, baby-boomers, and immigrants—whose need for jobs held wages down and lessened the pressure on management to increase each worker's efficiency. Adds Martin Baily, an economist at the Brookings Institution: "In the Fifties and Sixties there were opportunities that just don't exist now. Utilities and chemicals got big gains by building huge plants and refineries. With smaller plants and specialty chemicals, productivity growth has to come from skills, not scale."

The second worry: U.S. manufacturing investment is low, jeopardizing future gains. It's true that manufacturing is America's productivity star. Superb new data developed by a team at the University of Groningen in Holland show U.S. manufacturing at the head of the class in every industry category but one (see chart). After stumbling badly in the Seventies, output per hour danced ahead 36.6% from 1982 to 1990, according to the Bureau of Labor Statistics. That handily beats Germany's 26.2% and nearly matches the 38% gain in Japan. All in all, says Baily, manufacturing productivity growth in the Eighties "was about as good as in the glory years of the Fifties and Sixties."

Through takeovers, lopping off non-core businesses, scouring away bureaucracy, process redesign, and plain old downsizing, manufacturing cured itself of the dropsy that afflicted it the decade before. That's cold comfort to the millions who lost jobs, but American manufacturing is more productive as a result.

Trouble is, smokestack America isn't cranking up output as much as its increased efficiency would permit. From 1980 through 1990, U.S. industrial output rose only three-quarters as fast as manufacturing productivity. In Japan, by contrast, industrial output and productivity grew in lock step. As U.S. manufacturers cut payrolls, they also put the brakes on capital spending and research. As a percentage of GDP, U.S. private nonresidential fixed investment has been the lowest among the Group of Seven nations for the past five years; at 10.7% last year, it was just half Japan's. The average age of capital stock at nonfinancial U.S. corporations is now 8.52 years, the highest since 1965.

One result: The typical machine tool in an American factory is seven years older than in Japan, and two-thirds of all metal-forming machine tools in use in America are more than ten years old—this amid a revolution in machine-tool technology. New computer-controlled tools are so much better than their predecessors that Brian Papke, president of the American branch of Japanese toolmaker Yamazaki Mazak, tells customers that the surest path to success is to rip out old equipment and *give it away* to rivals.

Productivity rocket ship Rubbermaid (five-year average annual growth in output per hour: 21.4%) is an outfit that doesn't stint on new machines. In 1990, certain that recession had taken hold, the company upped its 1991 capital budget 30% rather than cut, as most U.S. corporations did to protect short-term profits. While Rubbermaid doesn't give away its hand-me-downs, it turns them over to brokers to sell, and competitors are welcome to them. Says President Wolf Schmitt: "Our goal is to reinvent ourselves. That's how you achieve productivity." But Rubbermaid is an exception.

Also worrisome is the need to tweak up corporate research and development. Using Census Bureau data on 20,000 factories, professor Frank Lichtenberg of Columbia University's business school

## INSIGHTS

- **U.S. manufacturing and services rank first in productivity.**
- **But productivity improvement has slowed. Japan, Germany, and other competitors are gaining.**
- **U.S. business raises productivity well by cutting inputs, but only investing more in people and innovation to increase outputs will raise living standards.**

REPORTER ASSOCIATE *Patricia de Lissa*

found that a dollar invested by business in R&D yields productivity gains approximately eight times greater than a dollar invested in plant and equipment. But too often in the U.S. those dollars have gone to the wrong products or industries, and the growth in private R&D spending—which is much more efficacious than government R&D—has fallen off dramatically since the mid-Eighties (see "What the U.S. Can Do About R&D").

THE THIRD unwelcome trend is in services, which employ four-fifths of the work force. Measuring services' output is so difficult, mostly because it is often intangible, that data don't exist for about 70% of service output—including insurance, government, health care, and the professions. Yet U.S. services must be comparatively productive. Explains McKinsey's Lewis: "The U.S. lead over Japan and Germany in manufacturing productivity is not large enough to explain the gap at the GDP-per-employee level. Therefore we must have a lead in services." Considering aggregate GDP figures, and taking into account the size of the service sector in the U.S. compared with those of other advanced nations, Lewis estimates that the U.S. has a 15% to 25% edge in service productivity.

However strong it is, this Achilles has a heel. Most evidence suggests that service productivity growth has been dismal. Economist Stephen Roach of Morgan Stanley calculates that private-sector service output per hour grew 0.7% a year in the 1980s (vs. 3.8% in manufacturing). Says James Trice, a vice president of Gemini Consulting who is an expert in insurance: "Most executives are still in the denial stage. They won't face up to the fact that they're not competitive."

Plenty of data back him up. In the Eighties, according to the BLS, output per hour in U.S. auto factories went up 43%; dealers and repair shops, however, improved just 18% and 7.5% respectively. Productivity growth in petroleum refining, 37%, more than doubled the 18% gain for petroleum pipelines, a service business.

The most stark evidence is what's happening to employment in services. The grim list of recently announced, permanent staff cuts at service companies—1,900 at Nynex, 4,800 at Aetna, 3,500 at the Travelers, 48,000 at Sears—is proof that the service sector had plenty of fat to trim.

In the Nineties, the knives are out. The reason: competition. Big chunks of the service economy—telecommunications, transportation, banking, insurance—have seen government regulation lifted or loosened, destroying cushy markets. Often the competition is global. For example, foreign banks' share of commercial and industrial loans to U.S.-based business jumped from 18% in 1983 to 45% by the end of 1991.

Responding to this tough new world, smart companies aren't just trimming, they're rethinking the way they work. As a result, they are at last beginning to benefit from their gargantuan investments—$862 billion in ten years—in information technology. A lot of this equipment did nothing for productivity because it was bought without thought for whether the newly automated processes were required at all. Says William Wheeler, a consultant at Coopers & Lybrand: "That's putting whipped cream on garbage."

Garbage—or something like it—was what the Bank of Boston found when it looked at its securities-processing business late in 1989. The business handles stock transfers, dividend and interest payments, pension plan administration, and related tasks—about 25 million transactions a year. It had six separate operations, each with its own mainframe, scattered over 11 locations. Work for one customer could shuffle through several systems—one for dividends, another for stock sales, a third for bond interest—costing time, labor, and money at each point.

Working with Coopers & Lybrand, the bank put everyone in securities processing at one location with two computer systems and set up the work around its core process, moving money. Computer cables run across the ceiling like track lighting, allowing the bank to change the layout overnight. The idea was to mimic a just-in-time, flexible factory. Says senior vice president John Towers: "We created a utility that could service all the product lines." Productivity soared: After 2½ years, with 17% fewer employees, the division does 80% more securities-processing business.

Thousands of service companies are starting to see such results. If gains in the first half of 1992 continue, nonmanufactur-

**Service ace: A high-tech office and new work processes gave Bank of Boston huge productivity gains.**

ing productivity will leap 2.5% this year. But beside the river of opportunity sits the Lorelei that seduced manufacturers: restructuring without investing in growth. Says Gemini's Trice: "We're going to see productivity increases—and it's about time, it was ridiculous—but if we're not careful we'll just downsize and spin off lines of business." Such a "slash-and-burn approach," Morgan Stanley's Roach warned Congress earlier this year, could cost the economy four million new jobs by 1997—"a steep price to pay for faster productivity growth."

HOW TO QUICKEN productivity's rise? Through work-redesign concepts like lean production, total quality management, and process reengineering, business knows more about how to cut inputs than ever before. Process reengineering, for example, usually eliminates many low-added-value jobs, replacing them with a few high-skill jobs. Consultants who do this work boast of quantum leaps in productivity. Privately, some worry. Says one: "How high does structural unemployment have to get before the social cost is too great?"

Fixing America's productivity problem means raising output faster, not just cutting inputs. The place to start is the federal deficit, which is the biggest source of disinvestment, soaking up savings faster than a Bounty towel does coffee. Government must also do more to enhance domestic private investment through policies that encourage capital formation, research, training, education, and entrepreneurship. The aim, besides boosting output, should be to ease the burden on those who are hurt by cuts in input while maintaining the flexibility that is America's great asset.

A long list of laws, incentives, habits, and regulations discourages investing for the long term. Among them: capital gains taxes that aren't indexed to inflation; state incorporation laws that require companies to pursue shareholder value but don't protect companies against lawsuits if they go for long-term growth rather than quick stock-price gains; the Glass-Steagall Act barring commercial banks, which might take the long view, from holding equity stakes in corporations; mutual funds that compete for new investors on the basis of quarter-to-quarter results; accounting rules that keep intangible investments like R&D off the balance sheet while docking it for potential liabilities like retiree health costs. There are good reasons for most of these, and some are more important than others. But, as Harvard business school professor Michael Porter argues in a new report for the Council on Competitiveness, a private Washington, D.C., group, together they and other laws and customs encourage American business to live for today rather than build for tomorrow.

Changing corporate grasshoppers into ants is delicate work. But a number of steps can be taken immediately, such as enacting tax credits for new plant and equipment—preferably aimed at new or small business—and, especially, a permanent tax credit for R&D.

America must also build its intellectual capital stock. A study by James Rauch of the University of California at San Diego ranked several American cities by the average level of education of their work forces, then compared their productivity. For every additional year of schooling, Rauch found 2.8% greater productivity. That's not only because educated workers do any old task better; good workers also beget better jobs. Highly skilled people attract investment in high-tech, high-productivity industries and could enable other industries, like textiles, to return to these shores by substituting smart labor for cheap.

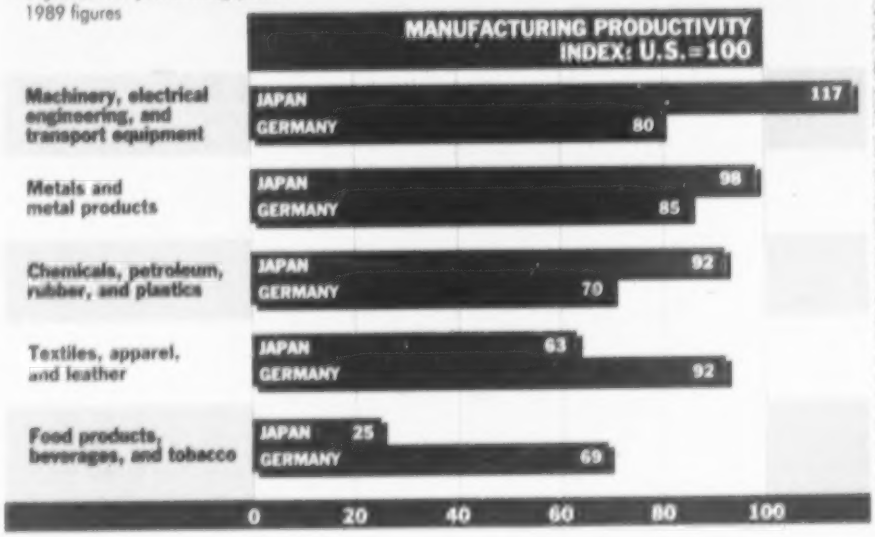
Training has similar benefits. In Boynton Beach, Florida, Motorola can make 200% more pagers than it could four years ago with just 22% more manufacturing employees. Says general manager Hector Ruiz: "The factory doesn't look much different. The improvement came about through training. Our return on training is on the order of 30 to 1."

AMERICA NEEDS more incentives for skill building (see following story). A laid-off worker who goes to school to learn new skills has to lie about it or lose her unemployment check—an easy-to-fix disincentive. State and local governments might want to increase support for community colleges, which as employee training institutions can be a powerful attraction to business. The feds should consider industrial extension programs modeled on those of the Department of Agriculture. To encourage training, companies should be required to disclose what they spend on it in their published accounts.

Here's how one business titan put the productivity imperative: "Cutting wages does not reduce costs—it increases them. The only way to get a low-cost product is to pay a high price for a high grade of human service and to see to it through management that you get that service." The man who said it? Henry Ford. As much as anyone, he helped create a mass consumer market of well-paid workers. But how many executives in the U.S. today remember Ford's point? ■

## U.S. PRODUCTIVITY STACKS UP STRONG

**Productivity measured by gross value added per hour at manufacturing site, adjusted for purchasing power**
1989 figures



# BRINGING REASON TO REGULATION

It doesn't have to be at odds with economic growth. Constructive regulatory reform means finding ways to identify the worst problems and solve them at the lowest cost. ■ *by Louis S. Richman*

AMERICA'S capitalism at its best—the freewheeling, entrepreneurial kind—has traditionally thrived most when it has been regulated with a light touch. Not unregulated—laws have made the environment cleaner, the workplace safer, and the consumer healthier than the unguided invisible hand could have. But now the touch has become expensively heavy.

In the regulatory arena America's admirable can-do spirit too often has become a must-do mentality: If it can be done, it must be done, regardless of the cost. Making matters worse, the process has become increasingly adversarial, partly because so much of it has moved into the courts.

Regulation and vibrant economic growth don't have to be at odds. In nations we compete with, such as Germany and Japan, regulators more often work cooperatively with business. The goal is to solve problems, not fix blame. Constructive regulatory reform, in this spirit, deserves a place high on the agenda for the next Administration.

Though the costs to the U.S. of regulation are impossible to pinpoint, the most comprehensive and widely accepted estimate comes from Rochester Institute of Technology economist Thomas D. Hopkins, a former Office of Management and Budget deputy administrator. He puts the 1991 pricetag at more than a half-trillion dollars—nearly 10% of the nation's gross domestic product. The largest and fastest-growing components: health, safety, and the environment.

Hopkins's estimate doesn't try to quantify the offsetting benefits. The total includes the good, the bad, and the ugly together—nobody can calculate how much *over*regulation costs. But here's a clue. The U.S. will spend some $1.6 trillion on environmental cleanup during the 1990s. Hopkins projects—roughly a third more in constant 1991 dollars than during the past two decades combined. The money isn't likely to yield the kinds of benefits the first tranches of money spent on environmental regulation bought us. The big gains have been won at costs that now look relatively low, and in many cases we're chasing after marginal improvements. Says Robert N. Stavins, an economist at Harvard's Kennedy School of Government and head of Project 88, a bipartisan environmental research group: "Getting the next 5% improvement could send costs through the roof."

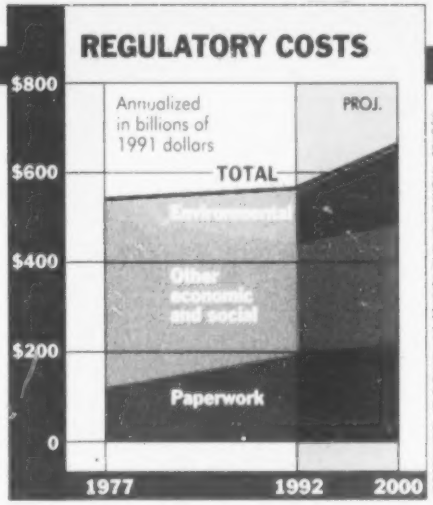
A mere dollar reckoning of costs, moreover, doesn't measure the full weight of the federal regulatory burden. Says Robert W. Hahn, an economist at the American Enterprise Institute, a market-oriented Washington, D.C., public policy research outfit: "The measurable costs of regulation pale against the distortions that sap the economy's dynamism. The public never sees the factories that weren't built, the new products that didn't appear, or the entrepreneurial idea that drowned in a cumbersome regulatory process."

The burden is especially rough on the small companies that before the recession were the nation's great job generators. The National Federation of Independent Business, a Washington trade group representing some 600,000 smaller employers, has been polling its members about their biggest business problems for two decades. This year, for the first time, regulation rose to the top of the list—ahead of taxes, the quality of labor, and the availability of credit. The smallest businesses are so overwhelmed now, says NFIB economist Thomas Gray, that they are taking to just ignoring the laws. "They're saying, in effect, 'Catch me if you can. I'll pay the fine,'" says Gray. "We're very close to a breakdown in the public's acceptance of the government's authority."

Small-business people are often the victims of regulations intended for large malefactors. The Financial Institutions Reform, Recovery, and Enforcement Act (Firrea)

■ WHEELCHAIR ACCESS, WASHINGTON, D.C.

REPORTER ASSOCIATE *John Labate*




Congress passed in 1989 is a case in point. Bank regulators now insist that the lending institutions they oversee pay a federally certified appraiser to value real estate put up as collateral for any loan over $100,000. The average $5,000 cost of such an appraisal can price a small business out of the market. Typically, the entrepreneurs put up their homes, and the default rate on small business loans poses little risk to the banks. The banks themselves could do the appraisals at a tenth of the cost.

Just trimming back the regulatory overgrowth would be difficult. But the next President will have to contend with major new laws—such as the Americans With Disabilities Act and the 1990 Clean Air Act, which have yet to be fully translated into rules for business and local governments to meet. Paul R. Portney, a senior fellow at Resources for the Future, a nonpartisan environmental economics research group in Washington, says the act is one reason Americans will be spending 2.8% of GDP to comply with federal environmental mandates by the end of the decade. Germans are no less green and face a monumental challenge in cleaning up the former East. Yet, Portney estimates, Germany will be spending 1.6% to 1.8% of GNP. None of these estimates include the unknown potential cost of legislation being considered that would impose tough recycling standards on the packaging industry, or whatever actions are taken to tackle global warming.

Since the challenge for public policy is to spend money where it will do the most good, federal regulatory reform should be guided by two objectives—effectiveness and efficiency. Where to begin? First, by getting the agencies—especially the Food and Drug Administration (FDA), the Occupational Safety and Health Administration (OSHA), and the Environmental Protection Agency (EPA)—to set sensible priorities.

Too many regulatory edicts are based upon unrealistic estimates of actual consumer, occupational, and environmental health risks. Most industrial countries limit exposure to hazards to tolerable levels. The U.S., by contrast, sets far more stringent "virtually safe doses." This mind-set dates back to 1957, when the Delaney Amendment required that any known carcinogen be eliminated, no matter how small or limited the exposure. But British researchers Richard Doll and Richard Peto, whose work is widely accepted on both sides of the Atlantic, have found that fewer than 9% of all cancer deaths can be attributed to pollution, contaminants on the job, food additives, or medications. Smoking and bad diet, by contrast, may cause nearly two-thirds of all fatal cancers.

Unrealistic goals can keep an agency from doing anything to improve safety. In 1989 OSHA tried to set standards for 428 common toxic air contaminants that, it estimated, could have saved some 700 workers' lives a year at an average cost of $1 million each. A federal court rejected the plan because it didn't set the requisite technically "feasible" limits. But to do that, OSHA would have had to run lengthy and expensive analyses of each contaminant. Result: no standards at all.

The President—any President—could bring balance to the no-risk-too-small attitude with the stroke of his pen, argues Thorne G. Auchter, a former OSHA director who heads a nonpartisan Washington research group called the Institute for Regulatory Policy. All it would take is an executive order requiring agencies to write and revise rules on the basis of uniform, scientifically sound risk-assessment guidelines.

*continued*

## HOW THE COSTS VARY

| REGULATION | AGENCY | ANNUAL NUMBER OF DEATHS per 100,000 of exposed population | COST PER LIFE SAVED |
|---|---|---|---|
| Mandatory seat belts for cars | National Highway Traffic Safety Administration | 9.1 | $390,000 |
| Prohibitions on alcohol and drug use by railroad employees | Federal Railroad Administration | 0.2 | $650,000 |
| Control and disposal standards for benzene | Environmental Protection Agency | 2.1 | $4 million |
| Disposal standards for uranium mine wastes | Environmental Protection Agency | 43.0 | $69 million |
| Restrictions on worker exposure to asbestos | Occupational Safety and Health Administration | 6.7 | $117 million |
| Restrictions on worker exposure to formaldehyde | Occupational Safety and Health Administration | 0.1 | $94 billion |

These would be developed by the White House Office of Science and Technology Policy, headed by the President's science adviser. Thus determined, priorities would reflect the areas of greatest danger rather than the wishes of the interest group that makes the shrillest pitch to Congress.

WITH RISKS more clearly defined, policymakers could better subject new regulations to rigorous cost/benefit analysis. It's not a new idea. President Jimmy Carter ordered executive branch agencies to evaluate the costs and benefits of their proposed edicts. Ronald Reagan established the Office of Independent Regulatory Affairs (OIRA) within OMB to review new mandates costing over $100 million and to suggest ways to make them more economical. Both of those promising efforts withered during the Bush Administration, though blame falls as much on Congress as on the President. The White House Council on Competitiveness, headed by Vice President Dan Quayle, has racked up a few successes in tempering regulation, but its resources are limited. More important, Congress and groups lobbying for regulation don't trust it because it is not subject to the same public disclosure process as OIRA.

As part of the solution, Bush or Clinton should rehabilitate OIRA's authority. But Congress has to help out by subjecting pending legislation to cost/benefit tests before it becomes law. Says former Reagan Administration EPA director Lee M. Thomas, currently CEO of the Kennesaw, Georgia, consulting firm Law Companies Environmental Inc.: "Right now Congress is more interested in dictating solutions than in defining the problems and measuring the damage they cause the private economy."

And how. The Americans With Disabilities Act incorporates fuzzy goals based on undefined standards of reasonableness —the courts will often have to decide what is "reasonable." No one can guess the ultimate costs, especially since many will be determined by lawsuits. But the American Hospital Association, which gets its specifications from a presidentially appointed panel, has enough particulars now to estimate that its members will have to spend some $20 billion over the coming decade. That includes the tab for everything from enlarging parking lots and bathrooms to altering clinics and testing facilities.

The results often aren't much better when Congress *does* spell out the solution desired. It sets ambitious targets and deadlines, then requires that federal agencies prescribe what equipment or processes companies use and how to use them. That command-and-control system works no better in regulation than it does for companies that tell suppliers how to build a component.

The best way to get creative solutions—and to minimize harm to the economy—is to harness the private sector's energies. The so-called tradable permits for sulfur dioxide emissions granted under the 1990 Clean Air Act are one example (see "Next Steps for the Environment"). To speed up evaluation of new drugs, the FDA—with the backing of the Council on Competitiveness—contracts testing out to private experts. Now drugmakers have agreed that the agency should also charge fees for applications so it can afford to hire more reviewers. Congressional leaders hope they can pass the proposal this year.

FOR AN INSTANCE of what's wrong with the current system, consider Prime Fiber Corp. of Appleton, Wisconsin, which reprocesses scrap used to manufacture recycled papers. Sitting on Prime's shelf is a promising new technology that would recover fibers from the waste sludge produced by pulp and paper mills, sludge that's now incinerated or dumped into landfills. Trouble is, the 1986 Resource Recovery and Conservation Act specifies that only paper that has been used in a consumer product may be reprocessed. Because the sludge is a *manufacturing* byproduct and thus falls outside the scope of the law, the EPA can't grant the waiver Prime needs without an act of Congress. Prime has been trying unsuccessfully to get one for three years.

Americans don't like tough choices about health and safety any more than they like tough choices about taxes and spending. While Washington must not cave in every time the target of a proposed regulation squawks about the costs—the targets usually imagine the worst when they first face the demands—it has to acknowledge that the U.S., like every other country, can spend only so much in trying to ensure a better world. Particularly in straitened economic circumstances, that means being hardheaded—and creative—about where and how to regulate.

### INSIGHTS

- **In a slow economy, America has to make tough choices about what rules it can afford.**
- **Hard science should be used to identify the greatest threats.**
- **Benefits of legislation must be weighed rigorously against costs.**
- **The regulators need an overseer in the White House.**

# THE NEW PAY GAME... AND HOW YOU MEASURE UP

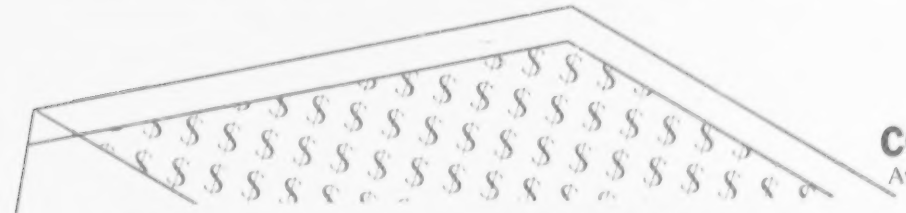
The manager's job has changed, and so have the rules used to determine who earns what.

*by Kenneth Labich*

IF YOU ARE a manager or a professional working for someone else, chances are that money has been on your mind a lot lately, just after job security. The recession and modest inflation have induced ever more U.S. companies to play Scrooge at raise time. Management consultancy Towers Perrin reports that white-collar raises averaged just 4.5% last year—the lowest in a decade.

If you think all this stinks on ice, just wait: It could get worse. It depends in part on whether you learn the brand-new pay game. Nobody taught you the rules because employers are just now working them out, yet your financial future could depend heavily on how well you master them.

The new approach to pay is one effect of the profound organizational changes rippling through corporate America—downsizing, flatter management pyramids, greater emphasis on teamwork, quality, and customer service. Old compensation systems



## COMPENSATION BY JOB

Average annual base salaries, in thousands

### FINANCE

| | |
|---|---|
| Chief financial officer | $194.7 |
| Corporate treasurer | $121.4 |
| Corporate controller | $113.7 |
| Top division financial executive | $111.1 |
| Top corporate financial analysis executive | $93.0 |
| Top corporate audit executive | $92.6 |
| Division treasurer | $79.9 |
| Division controller | $77.5 |
| Division budget manager | $60.4 |
| Senior financial analyst | $45.4 |
| Senior auditor | $42.2 |

### ACCOUNTING

| | |
|---|---|
| Top corporate tax executive | $106.0 |
| Top corporate accounting executive | $84.3 |
| Cost accounting manager | $56.9 |
| General accounting manager | $56.5 |
| Payroll manager | $47.1 |
| Senior tax accountant | $46.4 |
| Accounts payable / receivable manager | $45.8 |
| Senior accountant | $38.4 |

### HUMAN RESOURCES

| | |
|---|---|
| Vice president administration | $147.7 |
| Top human resource management executive | $109.1 |
| Executive compensation manager | $75.5 |
| Employee benefits manager | $61.7 |
| Equal employment opportunity manager | $57.4 |
| Employment and recruiting manager | $53.6 |
| Benefits planning analyst | $42.7 |

### INFORMATION SYSTEMS

| | |
|---|---|
| Chief corporate information officer | $130.7 |
| Top corporate information system executive | $101.2 |
| Division, subsidiary, or regional information systems executive | $86.1 |
| Applications systems analysis and programming director | $82.8 |
| Director of telecommunications | $78.3 |
| Operating systems programming manager | $69.3 |
| Applications systems analysis and programming manager | $66.3 |

### MARKETING AND SALES

| | |
|---|---|
| Top sales executive | $128.7 |
| Top marketing executive | $122.6 |
| Regional sales manager | $64.5 |
| Product planning manager | $63.5 |
| Product manager | $58.5 |
| Market research manager | $58.5 |
| Advertising manager | $55.5 |

### ENGINEERING

| | |
|---|---|
| Top engineering executive | $118.3 |
| Product development engineering manager | $68.0 |
| Environmental manager | $63.0 |
| Chief industrial engineer | $61.0 |

### PRODUCTION / OPERATIONS

| | |
|---|---|
| Top materials management executive | $103.7 |
| Top distribution executive | $93.0 |
| Top purchasing executive | $83.2 |
| Top production control and inventory management executive | $70.0 |
| Inventory planning and control manager | $67.0 |
| Plant manager | $64.6 |

SOURCES: TOWERS PERRIN; ALLAN W. MACRAE INC.; THE WORTH CO.

just don't fit this new world of work. Most managers have been getting paid largely according to how many people work for them, often with some variation based on how well they meet quantifiable goals. But what's the point, now that many corporations' aims include eliminating layers of management and pushing responsibility out of executives' offices and down to other workers? As Christopher Cardwell, a Towers Perrin compensation specialist, puts it, "It no longer makes sense to pay people according to the size of their empire." Instead, in leading-edge companies more managers are competing for raises based on less tangible criteria—leadership skills, flexibility, the ability to work well with others.

This tumult has an upside for some. Says Marsha Cameron, a principal at Wyatt Co., a human resources consulting firm: "The theory is that employers will need fewer, better managers, and they will be willing to pay more to get them." But you will have to be an especially nimble player, traversing a whole new game board, to make that theory pay off. A key first step is to find where you stand right now comparatively, and the charts on these pages should help. The main chart shows average annual base salaries for most corporate managers and professionals, while the smaller ones show how salaries tend to vary by industry and region.

EVEN IF YOU ARE ahead of the game, you won't stay there long unless you adapt to unfolding changes in how most companies pay managers. The old system was most prominently championed by the Hay Group consulting firm. The widely used Hay Plan, first employed in the 1950s and still in use at about 40% of the FORTUNE 500, rates each job according to know-how required, problem-solving capabilities needed, and accountability, or "answerability for action and the consequences thereof," as the manual puts it. The last category includes an analysis of a job's magnitude: How many workers do you control, and how big is your direct effect on the company's bottom line? The system also provides for instances where managers might be subjected to unsafe or particularly unpleasant working conditions. The result was a number of Hay points that determined a job's pay.

REPORTER ASSOCIATE *Kate Ballen*

## COMPENSATION BY INDUSTRY

Average annual base salaries, in thousands

| | Manufacturing | Utilities | Wholesale / Retail |
|---|---|---|---|
| **FINANCE** | | | |
| Chief financial officer | $224.0 | $200.2 | $205.2 |
| Senior financial analyst | $50.7 | $47.6 | $46.3 |
| **ACCOUNTING** | | | |
| Top corporate tax executive | $109.2 | $98.7 | $97.5 |
| General accounting manager | $57.9 | $63.1 | $54.2 |
| **HUMAN RESOURCES** | | | |
| Top human resource management executive | $126.6 | $112.8 | $107.3 |
| Employee benefits manager | $70.6 | $66.8 | $56.8 |
| **INFORMATION SYSTEMS** | | | |
| Chief corp. info. officer | $130.4 | $118.8 | $140.2 |
| Applications systems analysis and programming manager | $68.5 | $66.1 | $65.3 |
| **MARKETING AND SALES** | | | |
| Top marketing executive | $133.1 | $115.9 | $146.5 |
| Top sales executive | $134.1 | $126.7 | $153.8 |
| **ENGINEERING** | | | |
| Top engineering executive | $115.4 | $136.5 | $104.0 |
| **PRODUCTION / OPERATIONS** | | | |
| Top materials management executive | $107.0 | $83.2 | $124.2 |
| Plant manager | $78.9 | N.A. | $71.6 |

Until all the management changes of recent years, the Hay Plan was a reasonably effective tool, especially for manufacturing companies where the number of employees under a manager's control often accurately reflected her or his worth to the employer. But the move toward flatter, faster, leaner organizations has changed all that. Even the Hay Group's own top managers recognize their system needs reworking to reflect new corporate realities. Says Ira Kay, Hay's managing director for executive compensation: "There were clearer, more identifiable goals ten or 15 years ago. What's important for the organization is changing, and the system of evaluating jobs is necessarily in evolution."

One of the most important changes is that rigid salary hierarchies that proceed by small steps are disappearing. A company that once might have had 20 or more rungs on a compensation ladder now could place managers in three or four much wider striations. Under such a system, called broad banding, a manager might stay in one pay category ranging from, say, $50,000 to $100,000, throughout an entire career.

The advantages are obvious to an employer who has eliminated layers of organization and increasingly values managers with varied experience. The old system of narrow bands often required companies to promote people to a new layer (which may now be gone) in order to give them a raise. Not only is that no longer necessary, but both employers and employees also inevitably win without a rigid hierarchy controlling when and how managers change jobs. Says Michael Halloran, Wyatt's national director of executive compensation: "Broad banding gives a company tremendous flexibility. And more top managers are deciding they can't let compensation run their organization."

Though the rules may be a bit hazy right now, you may well find a rich lode of opportunities if your company moves to a broad-band pay structure. Under the old small-step hierarchical system, managers are often ineligible for major promotions until

they have passed through each step along the way. You can't replace a Category 6 manager with a Category 3 interloper. With broad banding, promising younger managers and rising stars can leapfrog into more challenging—and better-paying—jobs faster. Since the system also permits easier lateral moves, you should be able to broaden your work experience more readily.

That could prove crucial to your personal bottom line over the long haul, because increasingly managers will get paid for what they know rather than for seniority, title, or what they are doing at any particular time. It's a variant on so-called skill-based pay systems, which companies have used to encourage training among hourly workers for a decade or more: The employee receives extra pay each time he masters a specific skill, even if he won't use that skill right away.

Like broad banding, such systems let employers move people from job to job far more easily, with smashing results, employers report. A recent Towers Perrin study found that 70% of companies using the new system achieved improvements in productivity, 71% have cut operating costs, 88% generated higher quality, and 75% experienced lower employee turnover. While efforts to expand skill-based pay systems to cover more managers have run into occasional snags, particularly since so many elements of a manager's job defy quantification, the trend to include higher-level employees is running strong. Managerial skills worthy of extra pay could include behaviors clearly demonstrating effective leadership: How well do you develop people? How good are you as a role model? How persuasive are you in moving your team toward company goals?

In the future, among the most desirable—and therefore lucrative—traits for managers may simply be an ability to handle the massive change taking place. Says Wyatt's Halloran: "You've got to be more flexible, more able to work with other people in a cooperative way. You've got to remember you are no longer fighting it out with 18 other people to reach the next rung on the ladder. If you recognize how to deal well with this new world, you will get paid accordingly."

A RELATED and fast-moving trend in compensation involves new forms of financial incentives. While incentive pay is hardly a new notion, creative thinkers in some corporations have come up with intriguing new designs for it. Du Pont, for example, has tested a plan in which workers would risk a percentage of their regular salary in the hope of getting a bonus by meeting financial goals for their division. Employees were able to put up a total of 6% of their pay over three years and get back up to 12% if business turned up—or lose the whole thing if business turned down. The company was forced to scrap the plan when the Securities and Exchange Commission intervened, demanding the disclosure of sensitive information, but company officials consider the pilot project a promising experiment in motivating workers. Many companies are including lower-level employees in such incentive programs as stock grants and stock option grants—once reserved for top executives. Companies such as PepsiCo, Waste Management, and Merck hand out stock options to all full-time employees, no matter what their rank.

Such programs can be a relatively cheap way to bond employees to the company and get them thinking about the big picture. Option plans can also help tear down hurt

## COMPENSATION BY REGION

Average annual base salaries, in thousands

| ■ FINANCE | Atlanta | Boston | Chicago | Dallas | Los Angeles | New York |
|---|---|---|---|---|---|---|
| Chief financial officer | $235.1 | $176.6 | $193.7 | $195.5 | $255.4 | $244.3 |
| Senior financial analyst | $40.7 | $46.5 | $45.2 | $41.4 | $48.2 | $49.6 |
| **■ ACCOUNTING** | | | | | | |
| Top corporate tax executive | N.A. | $100.5 | $120.0 | $102.5 | $120.4 | $144.7 |
| General accounting manager | $48.0 | $54.1 | $60.1 | $53.6 | $61.0 | $64.7 |
| **■ HUMAN RESOURCES** | | | | | | |
| Top human resource management executive | $93.6 | $112.5 | $114.0 | $96.5 | $102.7 | $134.3 |
| Employee benefits manager | $49.5 | $56.9 | $64.7 | $59.8 | $59.3 | $75.0 |
| **■ INFORMATION SYSTEMS** | | | | | | |
| Chief corp. info. officer | $135.6 | $136.2 | $122.8 | $124.2 | $135.4 | $172.8 |
| Applications systems analysis and programming manager | $66.0 | $67.6 | $66.5 | $75.9 | $73.0 | $78.6 |

| ■ MARKETING AND SALES | Boston | Chicago | Dallas | Los Angeles | New York |
|---|---|---|---|---|---|
| Top marketing executive | $125.4 | $138.5 | $123.8 | $132.1 | $134.3 |
| Top sales executive | $124.6 | $131.6 | $125.1 | $132.4 | $153.3 |

| ■ ENGINEERING | Chicago | Denver | Houston |
|---|---|---|---|
| Top engineering executive | $129.8 | $155.9 | $119.6 |

| ■ PRODUCTION / OPERATIONS | Chicago | Cleveland | Washington |
|---|---|---|---|
| Top materials management executive | $101.6 | $87.5 | $108.2 |
| | **Chicago** | **Houston** | **Minneapolis** |
| Plant manager | $59.2 | $75.3 | $61.8 |

ful barriers between top executives and the troops: a middle manager who receives options for a few hundred shares may be happy simply to be included in the plan—and focus less on the chief executive's annual grant of several hundred thousand shares. Says David Swinford, a principal at the human resources consulting firm William M. Mercer: "People often tend to concentrate on differences in kind more than differences in quantity."

A warning for employers, though: Such incentive programs can make employees mad if they are handed stock options as a substitute for decent salary increases. The company's stock price—and therefore part of their financial future—is most likely beyond their influence. As Wyatt's Michael Halloran puts it, "Option grants [to employees below the top rank] are either a gift or some sort of prayer. They don't represent a true incentive, in that you can't tie them to an individual's performance." Moreover, the Financial Accounting Standards Board is contemplating a change that would require companies to account for option grants as an operating expense, just like wages. If that happens, you can expect such programs to dry up overnight at many companies.

**Employers will be needing fewer, better managers, and they should be willing to pay more to get them.**

WHILE all these compensation trends cross a broad range of companies, your financial health will still also depend on which company and which industry you're in. The experts' utterly unsurprising yet sometimes overlooked conclusion: The more profitable the operation you work for, the more likely you are to be compensated amply. An accountant working for a highly profitable pharmaceutical company will likely make more than one toiling away at an old-line steel company.

Salaries tend to slide as job applicants flock to a particularly flush industry, though highly technical and hard-to-fill jobs—chemical engineer, software designer—tend to pay well in just about any industry. The lesson here is to look very carefully at the company and the industry you are joining if you want to ensure the highest compensation. Says Mercer's David Swinford: "I'd rather be above average at a winning company than a superstar at a loser. Basically, you've got to assess the hell out of your company."

You should assess the hell out of yourself as well. Employers are more than ever looking for A-list players, high-octane talents who have shown they can innovate, solve problems, motivate people, and pump up revenues fast. No, it was not ever thus. Says Andrew Sherwood, chairman of the New York human resources consulting firm Goodrich & Sherwood: "Employers used to pay today's dollars for potential, for tomorrow's dreams. Now they pay today's dollars for yesterday's performance."

To play the compensation game well, consider your career as a series of stages. Younger managers just out of school or early in their first or second job should be less adamant about salary than about having a chance to acquire and then broaden their skills. The more you know, the more you will earn over the long run, and the tyro who opts for a higher-paying job with little scope will eventually fall way behind. James Challenger, president of the Chicago outplacement firm Challenger Gray & Christmas, says younger executives should disregard salary entirely until past age 30. Says he: "Don't even mention compensation when you're taking an interview. You've got to look at these early years as the building blocks of a career."

Thomas O'Reilly, a vice president with the executive search firm Lee Hecht Harrison, advises younger managers to find a field they can be comfortable with for a long time. "This is not the time to think about money, but rather what you really want out of your career," he says. "You should look for something you have a passion for."

**To stay ahead of the game, you'd better develop diverse skills and an ability to communicate and motivate.**

Once past 30 and into the second stage of your career, you must take compensation a good deal more seriously—especially if you are a top performer. That means that you have to insist on increases in keeping with the results you produce, no matter how poorly your company may be performing. A lot of highly skilled managers are making do on modest raises these days because their outfit is still struggling to escape the recession. Such a decision might have been an admirable demonstration of corporate loyalty in days past, but now you have to put yourself and your career first. Says Wyatt's Michael Halloran: "If you're good, you simply should not accept the bad-news blues from your employer."

EVEN IF YOU are getting reasonably enticing raises, you may want to switch companies at least once during this stage of your career in order to supercharge your compensation. Some consultants counsel obvious winners in their 30s to make a move every four or five years to leap up the salary charts. The key is to recognize whether you have the skills the market is looking for at any particular time.

After you've hit your mid-40s, you probably should be less inclined to jump jobs for extra money. But that doesn't mean you should go on the defensive and merely try to maintain your position—or that you have to stick with a dead-end situation. You've got to convince top management that your experience and leadership skills should still command an equitable salary, and you may have to switch companies or situations if your compensation has peaked prematurely. Older managers at a big corporation may, for example, think about moving to a startup operation or a smaller company where they can join top management and maybe get equity.

The bottom line of the new pay game is that in many ways it is less of a game than the old system of turf size and ladder climbing. Of course, it's not perfect. Any system that tries to measure something as amorphous as leadership qualities, for example, is subject to mistakes and abuse. But what makes the new approach new is its increased focus on what matters in business today: diverse skills, ability to communicate and motivate, flexibility, and achieving results rather than routinely performing tasks whose contribution may have been unclear. Focusing on those things—*and* understanding the system—are your best bets for better pay.

# LETTERS

## RESPONDING TO DEMAND FLEXIBLY

"Brace for Japan's Hot New Strategy" (September 21) was on the mark. Try as they might, businesses will never achieve perfect knowledge of the market's demands. Success will depend more and more on making operations flexible, so that changes in customer demand can be accommodated quickly and correctly.

One area in particular that can benefit from increased flexibility is distribution—a company's last chance to "make things right" is the process that gets a product into the hands of customers. Incremental improvements in efficiency often have a major effect on the bottom line. Furthermore, such improvements can provide a major competitive advantage because very few companies manage the distribution process well, in part because it presents complex problems that information systems are ill-equipped to solve.

GARY J. CROSS
*Vice President for Logistics Systems*
*Cleveland Consulting Associates*
*Cleveland*

## THE JOB DROUGHT (Cont'd)

"The Job Drought" (August 24) makes a useful distinction between the decline in total U.S. jobs and the more significant drop in quality jobs. The increased training and improved education you and many others suggest may boost the supply of high-quality job candidates but will do nothing to expand the supply of new jobs.

America is a nation that can invent virtually anything but seems unable to commercialize any of it. Meanwhile, many of the industries that have sprung up in Japan in the past two decades resulted from converting American science and technology to serve consumer needs.

Until America learns how to convert its own technology into successful new industries earlier and faster, the future supply of quality jobs will remain bleak.

MURRAY HILLMAN
*President, Strategy Workshop*
*New York City*

## UP IN THE HIGH NUMBERS

In "The 50 Largest Life Insurance Companies" (Global Service 500, August 24) you say Sun Life Assurance Co. of Canada, ranked No. 29, has US$248.3 million worth of life insurance in force for 1991. The correct figure is US$248.3 *billion*.

RICK WINSTON
*Media Relations Director*
*Sun Life of Canada*
*Toronto*

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